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AMPUTATION OF THE VAGINAL PORTION OF THE CERVIX UTERI IN CASES OF SUSPECTED CARCINOMA.*

By ANDREW F. CURRIER, M.D.,
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Perhaps it would be better to say *provisional amputation*, or "exploratory excision," as Müller styled it in a paper written in 1884 (*Ann. de la Soc. de méd. d'Anvers*, 1884, xlv, 235), the idea being that the operation is to be performed to enable one to complete a diagnosis which is incomplete and unsatisfactory without it. The object of the operation is also to avoid the alternative of removing the entire uterus and finding that the carcinoma was only a suspicion existing in the mind of the operator, which certainly does not magnify the wisdom or judgment of the latter and leaves the patient unnecessarily mutilated, even if she escapes with her life. As has already been intimated, the idea is not a new one, but I am not aware that the operation has been practiced to any considerable extent for the purpose of verifying a diagnosis of carcinoma of the vaginal portion. It is suggested because of the inconclusive

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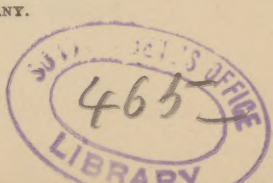

results which so often attend the examination of scrapings from the endometrium, and even of small portions of the cervical tissue itself. If a segment of tissue large enough and long enough to reveal the vital condition in the entire length and breadth of the vaginal portion is removed from any except very large organs, in which case amputation or trachelorrhaphy will frequently be indicated whether there is malignant disease or not, the resulting wound will quite destroy the symmetry and usefulness of the organ and may necessitate amputation, which might better have been determined upon at the outset. With the entire vaginal portion removed, we are in a position to study the extent of the disease, if disease exists, to decide with a greater degree of certainty, by the preparation of many sections, if necessary, as to the virulence of the disease, and either to interfere no further surgically or to perform hysterectomy if the conditions warrant such an operation. To a certain extent the proposition is analogous to that which is meeting with no little approval among general surgeons—namely, to precede resection of the intestine by colotomy.

The position which I take is entirely in harmony with the view which I have held and expressed for years, that upon early diagnosis must we mainly depend for the successful surgical treatment of malignant disease of the uterus. This point can not be too often repeated or too strongly emphasized, and the gynæcologist can not insist too vigorously that the general practitioner should seek advice whenever he finds a patient suffering with a stubborn erosion or ulcer of the mucous membrane of the vaginal portion or with hæmorrhage from the endometrium for which he can not satisfactorily account. But this position is aside from the question of precision in diagnosis, which in many cases will only be attained by the performance of

the exploratory or provisional operation to which I have alluded. Excluded from consideration at the present time are all those cases in which the existence of malignant disease is so unmistakable, both clinically and microscopically, that no time need be lost in provisional procedures. For such I would advocate, as I have done for years, the immediate total removal of the uterus and its diseased surroundings, or the palliative operation with scissors, curette, caustic, and cautery, if radical removal is impossible. Two motives have influenced me to the discussion of this subject in a brief paper. The first is that, in common with many other gynæcologists, I frequently see cases which make me suspicious of the presence of malignant disease of the vaginal portion of the cervix uteri. As already stated, the examination of scrapings and bits of tissue in such cases is often very inconclusive, and upon such evidence one should hesitate to recommend to a woman the dangers of a grave operation, the resulting mutilation and deformity, and the interference with important functions. The second is that operations have been performed, uteri and adnexa removed, only to find that there was no serious disease present in the organs. Naturally enough, the history of such cases is never published in all its details, the specimens are seldom shown at our society meetings, and he would be a very courageous or a very ignorant man who would run the gantlet of the criticism which the presentation of such specimens would call forth. But there is no man so acute in his judgment or so skillful in his operative work that he can afford to ignore the lesson which such experiences, real or potential, teach—namely, that careful diagnosis is at the bottom of all good work in the field which is under consideration.

Among the conditions which render diagnosis difficult with reference to the presence or absence of malignant

disease of the vaginal portion may be mentioned the following:

1. Endometritis, with or without hæmorrhage from the interior of the uterus.

2. Hyperplasia, with or without fissure of the os and endometritis.

3. Erosions, ulcers, and glandular disease.

In other words, the conditions which must always call for careful attention in connection with disease of the vaginal portion are hæmorrhage, infiltration, and ulceration, and the conditions which are kindred to or suggestive of them.

I. Endometritis is a comprehensive term. In its ordinary acceptation, in which there is merely a catarrhal condition of the endometrium, it does not excite apprehension of any serious pathological disturbance. It is the most common of all the disorders of the endometrium; there are few women who have experienced the pregnant state who do not suffer with it, and I am satisfied that we frequently attach greater importance to it than is warranted by the actual condition of affairs. But if the condition is one of active inflammation, with a constant discharge of pus, or of pus mingled with blood, it is neither simple nor harmless, and calls for serious investigation as to its cause and the proper means for its relief. It may be entirely unaccompanied by pain. There may or may not be a certain degree of debility resulting from the discharge. But in any case the endometrium should be thoroughly curetted, the tissue being scraped away to the submucous tissue, and the scrapings carefully examined. As has already been stated, such an examination frequently shows us nothing but the evidence of an inflammatory process, or it may leave us in doubt whether there is not also the existence of a neoplasm. If after the lapse of a few weeks there is no evidence of im-

provement, the discharges of pus, blood, and epithelium continuing, we are justified as the next step in the treatment in amputating the vaginal portion, which will yield us material for determining with greater certainty as to the extent of the disease, and we can then decide whether all necessary operative procedures have been adopted, or whether we should take steps of a more radical character and remove the entire uterus. If the disease proves to be purely inflammatory, or is very limited in its extent as a malignant process, no harm will have been done, the uterus will still be enabled to perform its customary functions, and we will have been placed on our guard for subsequent developments. I have known of cases of this kind which have retained their suspicious, semi-malignant character for years which have been held in check by curetting performed at sufficiently frequent intervals, and which have never enabled one to say with certainty that there was sufficient severity of the symptoms to warrant complete removal of the uterus. I have had cases in which the vaginal portion was amputated and in which the microscope showed that the malignant disease was limited to an area well below the plane of section. Of course one must not ignore the fact that the corporeal endometrium may be the seat of disease simultaneously with that of the cervix, perhaps even to a greater extent than the latter. Such cases unquestionably require the radical operation, and our investigation should not be limited to any one portion of the organ in determining the extent to which it is the subject of a disease process. The endometritis with hæmorrhage which results from abortion, retroflexion of the uterus, and the presence of submucous myomata has not infrequently given rise to the suspicion of malignant disease of the vaginal portion. I have seen illustrations of all these conditions in which such a suspicion was aroused.

II. Hyperplasia of the vaginal portion may be suggestive of the infiltration which accompanies malignant disease. I have seen such a suspicious condition in both nulliparous and parous women. The mucous membrane may be smooth and apparently healthy and the endometrium show nothing abnormal or only a slight catarrhal condition, and yet the unusual size of the vaginal portion suggests the possibility of a neoplastic process. I can recall such a case in a nulliparous woman in which the vaginal portion was amputated more than three years ago, nothing more than an excess of connective tissue being found in the specimen. The body of the uterus is still very large, the patient continues to suffer with dysmenorrhœa, and it is yet undecided whether she is afflicted with a slowly progressing interstitial inflammation or with an adenoma which may yet require radical measures.

In the cases in which there is not only enormous increase in the size and density of the vaginal portion but fissure of the os as well, with eversion of the endometrium, and possibly endometritis and hæmorrhage, the suspicion of malignant disease is often a reasonable one. It is this class of cases, in which the nutrition is so perverted, that suggested to the mind of Emmet years ago the possibility of the development of carcinoma upon such a foundation. I believe that with these conditions such a development frequently does occur. At any rate, amputation should be performed and the diagnosis can then be determined. Amputation, in my experience, is preferable in such cases to Emmet's operation, for though the latter would enable one to obtain a sufficient quantity of tissue for careful microscopic investigation, the depraved character of the tissue is not conducive to good union in case the wounded surfaces are brought together by a plastic operation. Of course this remark applies only to the cases in which the vaginal portion is very

large, the fissuring very extensive, and the density of the tissue excessive.

III. Erosions, ulcers, and glandular disease of the vaginal portion are frequently mistaken for malignant disease, but in many cases amputation will not be necessary to complete the diagnosis.

Erosions are sufficiently common, may include only a narrow circle of mucous membrane immediately contiguous to the os uteri, or may present a much more extensive area. The typical erosion, of benign character, is simply an accumulation of granulation tissue, which bleeds easily, like all granulation tissue, is never of spontaneous origin, and frequently disappears when the exciting cause is removed. In the great majority of cases it is caused by the discharge which accompanies endometritis, whether that be pus, blood, or mucus, and whether the endometritis be the consequence of an abortion, an intra-uterine tumor, or some other lesion of the endometrium. It is occasionally of traumatic origin, as in cases in which coitus has been violent, or in which a large and heavy vaginal portion has rested upon the floor of the vagina and the epithelium has been rubbed off by the movements of the patient. The free hæmorrhage which so often accompanies it, with the enlargement of the vaginal portion, which is also frequently present, should excite suspicion. If there is an endometritis or an intra-uterine tumor, the latter should be removed if possible, curetting should be performed, and the latter operation should include the careful scraping away of the granulation tissue forming the erosion. I have seen suspicious cases satisfactorily cleared up by such treatment and the diagnosis of benign disease determined; but if the eroded tissue absolutely refuses to heal, amputation of the vaginal portion will be indicated as the next procedure. Ulceration of the vaginal portion, apart from that which occurs in well-

marked cases of malignant disease, may be traumatic, syphilitic, or chancroidal, rodent and papillomatous. The traumatic ulcer may be the result and extension of erosion, it may follow an œdematous condition of the vaginal portion, to which condition I called the attention of the profession in a paper presented to the American Gynæcological Society in 1889, or it may be the result of violence from various causes. The syphilitic or chancroidal ulcer is not of frequent occurrence and should depend for diagnosis upon the data by which venereal sores are identified in other locations. The papillomatous ulcer, or *papilloma verrucosum*, was described by Heitzmann in 1887 (*Allgemeine Wiener medicinische Zeitung*, 1887, xxxii, 596). He had seen four cases—three in multiparæ and one in a nullipara—which subsequently became malignant and required extirpation of the uterus. He describes it as beginning as a small hypertrophic development upon the mucous membrane, usually upon the anterior lip, which may be as large as a lentil or a chestnut. It may become eroded or ulcerated and bleed freely. Its structure is papillomatous, with new glandular formation, and at the border of the erosion there may be groups of epithelial cells in nests, as in epithelioma. It may develop into epithelioma, but perhaps not until years have elapsed. The rodent or corroding ulcer of the vaginal portion was described by John and Charles Clarke, and is also a rare form of ulceration. John Williams has described three cases (*Transactions of the Obstetrical Society of London*, 1885, p. 60), and a paper upon the same subject has more recently been contributed by Browicz (*Ctrlbl. für Gynäkologie*, 1888, p. 94). This disease is quite suggestive of lupus, may continue for years, and may terminate in carcinoma. One of Williams's patients was under observation ten years, the second died from paralysis nine years after the discovery of the ulcer,

and in the third the cervix and vagina were nearly destroyed by the ulcerative process, and the fatal issue was probably influenced thereby. Browicz found no traces of carcinoma in his investigations, nor did Williams in either of his cases, but the number is too small to be considered as an argument against the development of carcinoma with this condition. The rodent ulcer is seen almost solely among the aged, with whom degenerative changes take place slowly. As this condition upon the exterior of the body may degenerate or develop into carcinoma, I see no reason for thinking that the same result may not occur upon the vaginal portion of the cervix uteri. For this condition, therefore, as well as for all other forms of ulceration which refuse to heal after treatment for a sufficient length of time with astringent and stimulating applications, amputation is indicated, not only for its diagnostic but also for its probable curative value.

I have referred to glandular disease of the vaginal portion as leading to uncertainty concerning the presence or absence of malignant disease, because nearly or quite all the subject of erosions and ulceration of the os uteri is referred by Ruge and Veit to the new formation of glandular tissue. Included also are the retention cysts and follicles of the vaginal portion as a part of the same process. Ruge and Veit see in this condition not only one which is very suspicious, but one which it is often impossible to differentiate from carcinoma. The carefulness with which their investigations were made and the closeness of their reasoning compel respect, though clinical experience may not always harmonize with their conclusions. I believe, however, that their investigations would amply justify the proposition which I have suggested—to perform amputation in all cases in which the diagnosis is doubtful. I have said that stimulating and astringent applications were sometimes

indicated before resorting to amputation. There is a degree of uncertainty as to the result in such treatment. It is impossible to foretell the degree of tissue irritation which will be caused by contact with a powerful astringent or caustic. I have seen cases in which the application of powerful solutions of chloride of zinc seemed to stimulate a malignant growth to increased activity. Spanton recently reported (*British Gynæcological Journal*, 1890, vi, 70) a case in which nitric acid was applied to a supposed syphilitic ulcer of the vaginal portion, the patient being at the same time subjected to constitutional treatment. The ulcer healed, but in six months another appeared upon the same situation, and examination of the excised tissue revealed its malignancy. In the discussion of Spanton's paper Inglis Parsons stated that many cases were on record (unfortunately, none were referred to) in which cancer had formed upon the site of syphilitic lesions. On the same occasion Fenwick reported a case in which there was a supposed syphilitic erosion of the vaginal portion. It disappeared in two weeks without treatment, but three months later there was a malignant growth of the cervix and vagina.

It may be asked why this operation is proposed rather than the high amputation of the cervix, which was so earnestly advocated by Schröder. The reply, which is a reiteration of what has already been said, is that this operation is proposed chiefly for diagnostic purposes; incidentally it will be curative in a certain proportion of cases.

Schröder believed that carcinoma of the vaginal portion usually remained limited to the cervix, and hence consistently and logically performed high amputation in such cases, while hysterectomy was reserved for those in which the body or the supravaginal cervix were involved. (See Winter. *Zeitschrift für Geburtshülfe und Gynäkologie*, xxxii, 1, p. 196.)

There is probably a field for the supravaginal amputation, though I doubt if it is as extensive as is believed by Hofmeier, Winter, and others of Schröder's followers; but this is not entirely germain to the question under discussion. The same may be said of an indication for amputation of the vaginal portion, which occasionally occurs in the coexistence of carcinoma with pregnancy. The supravaginal operation is manifestly inadmissible, while the other operation can usually be done without great danger to mother or child. Interesting cases of this character have been recorded by Ashton (*Maryland Medical Journal*, 1887, xviii, p. 77) and Godson (*Transactions of the Obstetrical Society of London*, 1884, xxv, p. 18). Concerning the method of performing the operation I have nothing new to offer. It is a simple operation, and I have usually performed it with curved scissors and a tenaculum or volsella. In cases in which the tissue is very dense a knife is preferable to scissors. The circumstances connected with each individual case will determine whether it is better to cauterize the wounded surface of the uterus, to allow it to granulate, or to cover it with the contiguous mucous membrane of the vagina.

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